

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

TRANSLATION
PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See Form PCT/ISA/210 (sheet 2)**

Applicant's or agent's file reference

EH0675-WO

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/EP2004/053714

International filing date (day/month/year)

28.12.2004

Priority date (day/month/year)

08.01.2004

International Patent Classification (IPC) or both national classification and IPC

G05B19/418

Applicant

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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

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Box No. 1	Basis of this opinion
1.	<p>With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.</p> <p><input type="checkbox"/> This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).</p>
2.	<p>With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:</p> <p>a. type of material</p> <p><input type="checkbox"/> a sequence listing</p> <p><input type="checkbox"/> table(s) related to the sequence listing</p> <p>b. format of material</p> <p><input type="checkbox"/> in written format</p> <p><input type="checkbox"/> in computer readable form</p> <p>c. time of filing/furnishing</p> <p><input type="checkbox"/> contained in the international application as filed.</p> <p><input type="checkbox"/> filed together with the international application in computer readable form.</p> <p><input type="checkbox"/> furnished subsequently to this Authority for the purposes of search.</p>
3.	<p><input type="checkbox"/> In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.</p>
4.	<p>Additional comments:</p>

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Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

1. Statement

Novelty (N)	Claims	<u>3, 7</u>	YES
	Claims	<u>1, 2, 4-6, 8-10</u>	NO
Inventive step (IS)	Claims		YES
	Claims	<u>1-10</u>	NO
Industrial applicability (IA)	Claims	<u>1-10</u>	YES
	Claims		NO

2. Citations and explanations:

1. Reference is made to the following documents:

D1: WO 00/77592 A (THE FOXBORO COMPANY) 21
December 2000 (2000-12-21)

D2: US 2002/103946 A1 (GAISER MARTIN) 1 August
2002 (2002-08-01)

2. As regards independent method claim 9

2.1 It would appear from the description of the present application (paragraphs [0019], [0032], [0036], [0037]) that the feature that the two data transmission techniques are simultaneously used on the same signal line is essential to the definition of the claimed system.

Since independent claim 9 does not expressly contain this feature, it does not meet the requirement of **PCT Article 6** in conjunction with PCT Rule 6.3(b) that each independent claim must include all the technical features essential to the definition of the invention.

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2.2 It should also be noted that the use of an existing signal line to use a new data transmission technique that allows a higher data transmission rate is disclosed in the prior art (D1, page 58, lines 24-29). Therefore, the present application does not satisfy the criterion in PCT Article 33(2) because the subject matter of independent method claim 9 is **not novel** in relation to the prior art as defined in the Regulations (PCT Rule 64.1 to 64.3).

3. In addition, the modernization method which was described in the description of the present application and which independent method claim 9 attempts to define does **not involve an inventive step** (PCT Rule 65.1, 65.2).

In order to assess the inventive step, it is even assumed that the essential feature (9f) (see below) has already been included in claim 9.

D1, which is regarded as being the closest prior art, discloses a method:

- 9a) for modernizing a process system having a plurality of field devices which interchange data with a control room via a signal line (figures 1-3; page 52, lines 25-28 with page 49, lines 9-22),
- 9b) all of the older field devices which transmit data to the control room W

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- in accordance with a first transmission technique (field devices with the "HART protocol", page 49, lines 15-25)
- 9d) being replaced (page 52, line 25 - page 53, line 3; page 56, lines 8-13)
- 9c) with new field devices
- which operate in accordance with a second transmission technique ("Powered Ethernet"),
- 9e) the data being transmitted in accordance with the second transmission technique in a separate channel on the existing signal line (implicit, HART: 1.2 kbps; Ethernet: 10 Mbps; page 50, lines 1-2, page 52, lines 5-8).

However, D1 does not disclose:

- 9f) that the two data transmission techniques are simultaneously used on the same signal line

since all of the older field devices were replaced in D1.

The problem addressed by the present application can therefore be considered that of minimizing the costs of modernization.

As a solution to this problem ([0002]-[0005] in D2), **D2** discloses the use of field devices with different protocols on the same bus system (claims 1-3, [0020]-[0021] in D2). In other words, D2 discloses the essential feature that was not disclosed in D1.

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Since the same advantages as in the present application are mentioned in D2 as regards said feature, a person skilled in the art would consider the inclusion of this feature, together with the features (9a)-(9e) (see above), in a modernization method to be a routine measure for solving the problem of interest.

Therefore claim 9, and the entire modernization method disclosed in the description of the present application, does not satisfy the criterion in PCT Article 33(3).

4. A process system according to independent apparatus claim 1 does not satisfy the criterion in PCT Article 33(3) and PCT Rule 65.1, 65.2 since such a system directly results from carrying out the obvious modernization method from claim 9.
5. Independent method claim 10 was formulated so broadly that its subject matter was disclosed by a plurality of documents (see documents in the international search report).

D2 discloses a method for communicating in a process system having a plurality of field devices, an existing signal line being simultaneously used for a first transmission technique and for a second transmission technique (claims 1-3, [0020]-[0021] in D2).

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The subject matter of claim 10 is therefore **not**
novel (PCT Article 33(2), PCT Rule 64.1 to 64.3).